Parallel Symposia (Total: 13)

These parallel symposia are presented in the afternoons and one in the evening. The subjects of these symposia are designed to fit uniquely to the memberships of respective organizations.

Monday June 6

Parallel Symposium 1 (INA) Monday June 6, Hall 3

**Neurodegeneration and Neuroprotection: Neurons and Microglia**

Chair: Wei Zheng (USA)

13:00-13:25 Toxic polynepathy in Taiwan. *Chin-Chang Huang*, Dept of Neurology, Chang Gung Memorial Hospital, Chang-Gung University, Taipei, Taiwan

13:25-13:50 Neuroinflammation and α-Synuclein dysfunction potentiate each other driving chronic progression of Parkinson’s Disease. *Hui-Ming Gao and Jau-Shyong Hong*, Laboratory of Toxicology and Pharmacology, National Institute of Environmental Health Sciences/National Institutes of Health, Research Triangle Park, NC, USA

13:50-14:15 Bridging the gap between in vitro and in vivo neurotoxicity: Do we need sophisticated models or functional endpoints? *Remco Westerink*, Institute for Risk Assessment Sciences Utrecht University, Netherlands

14:15-14:40 PTEN nuclear translocation plays a critical role in NMDAR –mediated excitotoxic neuronal death. *Yu Tian Wang*, Brain Research Centre, University of British Columbia, Vancouver Canada

14:40-15:00 Identification of molecular modulators of methylmercury-induced dopamine neuron degeneration in C. Elegans. *Richard Nuss*, Dept of Pharmacology and Toxicology, Indiana University School of Medicine, Indianapolis, IN, USA

Parallel Symposium 2 (ICOH) Monday June 6, Hall 4

**Neurobehavioral and neurodevelopmental effects of pesticide exposures**

Chair: Leslie London (South Africa) and Co-Chair: Cheryl Beseler (USA)

13:00-13:20 Evaluation of experimental data for developmental neurotoxicity of Pesticides. *Angelc Moretto and Claudio Colosio*, Dept of Environmental and Occupational Health, Università degli Studi di Milano, Italy


13:40-14:00 Mancozeb and chlorpyrifos exposure is associated with behavioral disorders and cognitive effects in boys aged 6 to 9 from Talamanca, Costa Rica. *Berna van Wendel de Joode and Ana Maria Mora*, Central American Institute for Studies on Toxic Substances (IRET) Universidad Nacional, Heredia, Costa Rica

14:00-14:20 Attention deficit/hyperactivity disorder and urinary metabolites of organophosphate
insecticides in U.S. children. **David Bellinger**, Harvard School of Public Health, Boston, USA

14:20-14:40 Depressive symptoms in pesticide poisoned and non-poisoned individuals: Association with injury. **Cheryl Besser**, Center for Disease Control and Prevention, Atlanta, USA

14:40-15:00 The association of suicidality, depression and organophosphate exposure amongst farmers workers in South Africa. **Leslie London**, Department of Occupational Health, University of Cape Town, Cape Town, South Africa

15:00-15:15 Coffee Break

**Parallel Symposium 3 (INA) Monday June 6, Hall 3**

Emerging Neurotoxic Mechanisms in Environmental Factors – Induced Neurodegeneration

*Chair: Anumantha Kanthasamy (USA)*

15:15-15:45 Hyperacetylation of Histones and Non-Histone Proteins as an Emerging Epigenetic Mechanism in Neurotoxicity. **Anumantha Kanthasamy**, School of Veterinary Medicine, Iowa State University, Ames, USA

15:45-16:15 Environmental Exposure and Epigenetics: Resetting the Aging Program at Birth. **Nassei Zawia**, Dept of Biological and Environmental Sciences, University of Rhode Island, Kingston, USA

16:15-16:45 Role of Autophagy in Cell Death and Survival During Neurotoxic Insults. **Arthi Kanthasamy**, School of Veterinary Medicine, Iowa State University, Ames, USA

16:45-17:15 Alpha-Synuclein Phosphorylation, Aggregation and Neurotoxicity: A Possible Role of MLK Group of Kinases. **Ajay Rana**, Dept. of Pharmacology and Experimental Therapeutics, School of Medicine, Loyola University, Chicago, USA.

**Parallel Symposium 4 (ICOH) Monday June 6, Hall 4**

Occupational Neurotoxicities in Asian Countries

*Chair: Monika Meyer-Baron (Germany) and Co-Chair: Seong-Kyu Kang (S. Korea)*

15:15-15:40 Neurotoxicity of 1-bromopropane, an alternative to ozone-depleting solvents. **Gaku Ichihara**, Nagoya University Graduate School of Medicine, Nagoya, Japan

15:40-16:05 Occupational Neurotoxicity in Korea, history of occupational diseases and prevalence of neurotoxic chemicals. **Eun Kim**, KOSHA, South Korea

16:05-16:30 Solvent neurotoxicity among working children. **Iman Nuwayhid**, Occupatinoa Environmental Health, American University of Beirut, Beirut, Lebanon

16:30-16:55 Reproductive and developmental effects of lead and other trace metals: internationa collaboration studies between Japan, Iran and China. **Kazuhiro Yokoyama**, Dept of Epidemiology and Environmental Health Juntendo University, Tokyo, Japan

16:55-17:15 The impact of occupational exposure to pesticides: State of the art in asian countries **Monika Meyer-Baron**, Leibniz Research Centre for Working Environment and Humar Factors, Dortmund, Germany

17:30-18:30 Business meeting: INA,Hall 3; ICOH, Hall 4

18:30-20:00 Dinner, Function Room
Tuesday June 7

Parallel Symposium 5 (INA) Tuesday June 7, Hall 3

Neurotoxicity Potential of Engineered Nanomaterials

Chair: Robert A. Yokel (USA) and Co-Chair: William K. Boyes (USA)

13:00-13:25 Overview of nanomaterials in the nervous system, drug applications, benefits, and potential risks. Martin Philbert, University of Michigan, Ann Arbor, USA

13:25-13:50 The toxicokinetics of engineered nanomaterials. Robert A. Yokel, College of Pharmacy University of Kentucky, Lexington, USA

13:50-14:15 Translocation into the brain and potential neurological damage following nanoparticle exposure. Chunying Chen, National Center for Nanoscience and Technology, Beijing, China

14:15-14:40 Engineered Metallic Nanoparticles and Blood-Brain-Barrier. Syed Ali, Division of Neurotoxicology, NCTR/FDA, Jefferson, AR USA

14:40-15:00 The retina as a potential site of nanomaterial phototoxicity. William K. Boyes, U.S. EPA Research Triangle Park, USA

Parallel Symposium 6 (ICOH) Tuesday June 7, Hall 4

Using Epidemiology and Neurotoxicology to Reduce Risks to Young Workers

Chair: Diane Rohlman (USA) and Co-Chair: Iman Nuwayhid (Lebanon)

13:00-13:20 Health hazards and workplace conditions of carpet weaving children in three districts of Punjab, Pakistan. Muazzam Nasrullah, Injury Control Research Center, West Virginia University, Morgantown, USA

13:20-13:40 Methodological issues in testing working children exposed to solvents. Basema Saddik, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia

13:40-14:00 Bringing the Unknown to the attention of Policy Makers: Young African Informal Sellers Exposures to Highly Hazardous Street Pesticides. Andrea Rother, University of Cape Town Cape Town, South Africa

14:00-14:20 Creating Safe Work Environments for Adolescent Farmworkers in the United States. Diane Rohlman, Oregon Health & Science University, Portland, USA

14:20-14:40 Setting permissible exposure levels for working children: ethics versus science. Iman Nuwayhid, American University of Beirut, Beirut, Lebanon

14:40-15:00 Panel Discussion: Speakers, Philippe Grandjean, Institute for Production and Work Environment Development, Ecuador; Ahmed Ismail, Menoufia University, Egypt.

15:00-15:15 Coffee Break
Developmental Thyroid Hormone Disruption: Prevalence, Environmental Contaminants and Neurodevelopmental Consequences

Chair: Mary E. Gilbert (USA)

15:15-15:40 Role of thyroid hormone in neurodevelopment. R. Thomas Zoeller, Department of Zoology, University of Massachusetts, Amherst, USA

15:40-16:05 Neurobehavioral Effects of Hypothyroidism in Children from Antenatal and Childhood Exposure. Joanne Ravet, Hospital for Sick Children, University of Toronto, Toronto, Canada

16:05-16:30 Endemic Cretinism revisited and its elimination through Universal Salt Iodization. Zupe Chen, Institute of Endocrinology, Tianjin Medical University, Tianjin, China

16:30-16:55 PCBs and PBDEs bind to the nuclear thyroid hormone receptor and disrupt cerebellar development. Noriyuki Koibuchi, Department of Integrative Physiology, Gunma University, Graduate School of Medicine, Gunma, Japan

16:55-17:15 Neurodevelopmental consequences of low-level thyroid disruption induced by environmental contaminants. Mary E. Gilbert, U.S. EPA, Research Triangle Park, USA

Parallel Symposium 8 (ICOH) Tuesday June 7, Hall 4

Current Needs and Future Directions of Occupational Safety and Heath in a Globalized World

Chair: Michael Aschner (USA) and Co-Chair: Frederick Perera (USA)

15:15-15:45 In vitro and in vivo toxicology and biology of carbon nanotubes and buckypaper: a perspective in occupational medicine. Federico Micciulla, National Institute of Nuclear Physics, INFN, Frascati, Italy

15:45-16:15 The Hazards of Technology Waste for Workers and Children. Steve Gilbert, Director and Founder of the Institute of Neurotoxicology and Neurological Disorders (INND), Seattle USA

16:15-16:45 Differential tissue uptake of nanoceria, brain versus peripheral organs. Michael T. Tseng, Dept of Anatomical Sciences & Neurobiology, University of Louisville, Louisville, USA

16:45-17:15 Effects of prenatal polycyclic aromatic hydrocarbon (PAH) exposure and environmenta tobacoo smoke on child IQ in a Chinese cohort. Frederick Perera, Dept of Environmenta Health Sciences, Columbia University, New York, USA.

Student Symposium (INA & ICOH) Tuesday June 7, Hall 3

Neurotoxicology: Matters, Methods, and Mechanisms

Chair: Jordi Llorens (INA) and Co-Chair: Roberto Lucchini (ICOH)

17:30-17:40 Micropatterned neuronal cells for analysis of the stimulatory and protective effects of brain-derived neurotrophic factor. Julia Sisnaiske (Mentor: Christoph van Thriel), IFA-Dol合理 Research Center for Working Environment and Human Factors, Dortmund, Germany

17:40-17:50 Chronic arsenite exposure through drinking water change the synapse structure of neuron and impair spatial memory of SD rats. Jinfei Jing (Mentor: Jingyuan Chen), Dept of Military Preventive Medicine, the Fourth Military Medial University, Xi'an, China

17:50-18:00 In vivo manganese exposure disrupts brain copper homeostasis by reducing copper clearance at brain barriers. Xue Fu (Mentor: Wei Zheng), School of Health Sciences, Purdue University, West Lafayette, USA

18:00-18:10 Ceria engineered nanoparticle association with the blood-brain barrier using in situ brain perfusion. Mo Dan (Mentor: Yokel, Robert), Dept of Pharm Sciences and Toxicology, University of Kentucky, Lexington, USA

18:10-18:20 Neuroimaging of brain manganese and GABA as biomarkers of occupational manganese exposure. Zaiyang Long (Mentor: Ulrike Dydak), School of Health Sciences, Purdue University, West Lafayette, USA

18:20-18:30 Cognitive function changes and the abnormal expression of tau protein by
Xiao-ting Lu (Mentor: Qiao Niu), Dept of Occ Health, Shanxi Medical University, Taiyuan, China

18:30-20:00 Dinner, Function Room

Parallel Symposium 13 (ICOH Evening Symposium) Tuesday June 7, Hall 4

Speakers chosen from the submitted abstracts

Chair: EunA Kim (Korea) and Co-Chair: Donna Mergler (QUEBEC)

20:00-20:20 Association of prenatal exposure to methylmercury and n-3 fatty acids with neurobehavioral test performance at ages 7 and 10 years. Anna Choi, Harvard School of Public Health, Boston, USA

20:20-20:40 Reliability of neurobehavioral performance tests by farmers on pesticide use in Korea. Sakong Joon, Dept of Occupational and Environmental Medicine, Yeungnam University, Korea

20:40-21:00 Neurotoxicity of acrylonitrile: Potential protectants. Rongzhu Lu, Dept of Preventive Medicine, Jiangsu University School of Medical Science, China

21:00-21:20 Neurobehavioral effects of pesticide exposure among farmers and adult members of their family in the western cape, South Africa. Z Holtman, Centre for Occupational and Environmental Health Research, School of Public Health & Family Medicine, University of Cape Town, South Africa

21:20-21:40 Neuromotor function in ship welders after cessation of manganese exposure. Gunilla Wastensson, Dept of Occupational and Environmental Medicine, University of Gothenburg, Gothenburg, Sweden

21:40-22:00 Neurobehavioral performance among workers at water-based paints factory. Gaafar N Abdel Rasoul, Community, Environmental and Occupational Medicine Department, Menoufa University, Egypt

Thursday June 9

Parallel Symposium 9 (INA) Thursday June 9, Hall 3

Strategies and Tools for Preventing, Neurotoxicity: To Test, To Predict, and How to Do It

Chair: Jordi Llorens (Spain)

13:00-13:30 Regulatory Neurotoxicity Testing Today to Infinity and Beyond: Evolution or Revolution? Abby Li, Exponent Health Sciences, San Francisco, USA

13:30-14:00 Neurotoxicity testing in the 22nd century: a vision or a smell? Jordi Llorens, University of Barcelona, Barcelona, Spain

14:00-14:30 Neurotoxicity testing: the challenge of in vitro alternatives. Sandra Ceccatelli, Dept. of Neuroscience Karolinska Institutet, Stockholm, Sweden

14:30-15:00 Cell-based methods for predicting neurotoxicity of environmental pollutants. Cristina Sunol, Institut d’Investigacions Biomèdiques de Barcelona, CSIC-IDIBAPS, Barcelona, Spain

Parallel Symposium 10 (ICOH) Thursday June 9, Hall 4

Chronic Solvent Induced Encephalopathy: a Step Forward

Chair: Gert van der Laan (Netherlands) and Co-Chair: Markku Sainio (Finland)

13:00-13:20 Struggling with cases: some problems in the assessment of CSE. Ellie Wekking and Moniek van Hout, Corone Institute, Amsterdam, The Netherlands

13:20-13:40 Multimodal event related potentials in occupational chronic solvent encephalopathy. Petra...
Keski-Säntti, Occupational Health Institute, Helsinki, Finland

13:40-14:00  Memory and metamemory functioning in patients exposed to organic solvents. Ritva Akila, Occupational Health Institute, Helsinki, Finland

14:00-14:20  Effectiveness of a screening program on CSE: the Dutch Painters Study. Gert van der Laan, Coronel Institute, Amsterdam, The Netherlands

14:20-14:40  Search for workers with potential CSE in trade union registers. Markku Sainio, Occupationa Health Institute, Helsinki, Finland

14:40-15:00  The course of chronic solvent induced encephalopathy, results of a study in the Netherlands. Evelien van Valen, Coronel Institute, Amsterdam, The Netherlands

15:00-15:15  Coffee Break

Parallel Symposium 11 (INA) Thursday June 9, Hall 3

CAAT- special topic: Translating neurobehavioral test results into in vitro readouts

Chair: Christoph van Thriel (Germany) and Co-Chair: Marcel Leist (Germany)

15:15-15:40  Use of genetic polymorphism to design better test systems. Christian Beste, Institute for Cognitive Neuroscience, Biopsychology, Ruhr University, Bochum, Germany

15:40-16:05  Linkage of solvent neurotoxicity between in vitro and in vivo systems via the NMDA-glutamate receptor. Ambuja S. Bale, National Health and Environmental Effects Research Laboratory, U.S. EPA, Research Triangle Park, USA

16:05-16:30  In vitro endpoints of relevance to organophosphorus pesticide-induced neurobehavioral deficits. Pamela J. Lein, Molecular Bioscience, University of California, Davis, USA

16:30-16:55  Functional assays in murine and human embryonic stem cell derived neural cells to detect neurodevelopmental toxicants. Marcel Leist, Doerenkamp-Zbinden, University of Konstanz, Konstanz, Germany

16:55-17:15  The network formation assay (NFA) – a general tool for the investigation of neuron plasticity? Christoph van Thriel, IfADo - Leibniz Research Centre for Working Environment and Human Factors, Dortmund, Germany

Parallel Symposium 12 (ICOH) Thursday June 9, Hall 4

Manganese exposure and cognitive deficits: a growing concern for manganese neurotoxicity

Chair: Harry Roels (Belgium) and Co-Chair: Rosemarie M. Bowler (USA)

15:15-15:40  Functional neuroimaging in welders exposed to manganese. Yangho Kim, University of Ulsan, South Korea

15:40-16:05  Blood manganese concentrations and postnatal neurodevelopment. Birgit Claus Henn, Harvard University, Boston, USA

16:05-16:30  Occupational exposure to manganese (Mn): Reversibility outcome of early Mn-inducec neurotoxic effects after decrease of exposure. Harry Roels, Université catholique de Louvain, Brussels, Belgium.

16:30-16:55  Relationship of airborne manganese exposure with neurological and neuropsychological test results in a community living near a point source. Rosemarie M. Bowler, San Francisco State University, CA, USA.

16:55-17:15  Manganese exposure and cognitive deficits: a growing concern for manganese neurotoxicity. Donna Mergler, Centre for Interdisciplinary Research in Biology, Health, Environment and Society, University of Quebec at Montreal, Montreal, Canada

17:15-19:30  Break

17:30-18:30  International Soccer Game: FMMU main campus

19:00-22:00  Banquet and Art Performance, Hall 1 and 2
21:15  

Awards and Recognitions  (Dr. Wei Zheng)